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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,933	07/07/2003	Kazuhiro Ando	239804US2	6925
22850	7590	03/16/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			NEGRON, ISMAEL	
			ART UNIT	PAPER NUMBER
			2875	
DATE MAILED: 03/16/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/612,933

Applicant(s)

ANDO ET AL.

Examiner

Ismael Negron

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-15 and 18 is/are rejected.
- 7) ☒ Claim(s) 1, 7, 8, 10, 16, 17, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on January 21, 2005 and February 11, 2005 has been entered. Claims 1, 7, 8, 10, 16 and 17 have been amended. No claim has been cancelled. Claims 19 and 20 have been added. Claims 1-20 are still pending in this application, with claims 1 and 10 being independent.
2. The drawings were received on February 11, 2005. These drawings are acceptable.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities: lines 2 and 3 should read " a light source that illuminates an object of illumination, having first and second illuminating light portions". Appropriate correction is required.
4. Claim 10 is objected to because of the following informalities: lines 2 and 3 should read "light source means for illuminating an object of illumination, having first and second illuminating light portions". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 9-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over BOHN (U.S. Pat. 6,033,086) in view of MIYASHITA et al. (U.S. Pat. 5,604,606)

BOHN discloses an illumination device having:

- **a light source (as recited in claims 1 and 10), Figure 4, reference number 44;**
- **the light source illuminating an object of illumination (as recited in claims 1 and 10), inherent;**
- **the light source having first and second illuminating light portions (as recited in claims 1 and 10), Figure 4, reference numbers 50" and 50;**
- **a reflecting member (as recited in claims 1 and 10), Figure 4, reference number 48;**
- **the reflecting member being provided opposite the light source (as recited in claims 1 and 10), as seen in Figure 4;**
- **the reflective member directing the first illuminating light portion from the light source to the object of illumination (as recited in claims 1 and 10), Figure 4, reference number 50";**
- **the second illuminating light portion directly illuminating the object of illumination (as recited in claims 1 and 10), Figure 4, reference number 50;**

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- **the distance between the reflecting member to the object of illumination being less than a distance between the light source and the object of illumination (as recited in claims 2 and 11), as seen in Figure 4;**
- **a light-receiving element (as recited in claims 9 and 18), Figure 4, reference number 64;**
- **the light-receiving element receiving light reflected from the object of illumination (as recited in claims 9 and 18), as seen in Figure 4;**
- **a focusing lens (as recited in claims 9 and 18), Figure 4, reference number 60; and**
- **the lens condensing the light received from the object of illumination toward the light-receiving element (as recited in claims 9 and 18), column 7, lines 1-4.**

BOHN discloses all the limitations of the claims, except

- a light-blocking member (as recited in claims 1 and 10);
- the light blocking member being provided between the object of illumination and both the light source and the light reflecting member (as recited in claims 1 and 10);
- the light blocking member blocking at least part of both the first and second illuminating light portions (as recited in claims 1 and 10);

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- the light blocking member having a certain ratio of a light-blocking rate for the first illuminating light portion to a light-blocking rate for the second illuminating light portion of the illuminating light (as recited in claims 1 and 10);
- a light-transmitting member (as recited in claims 3 and 12);
- the object of illumination being placed on the light transmitting member (as recited in claims 3 and 12);
- the light-transmitting member being provided between the reflecting member and the object of illumination (as recited in claims 3 and 12);
- the light-blocking member being provided to the light-transmitting member (as recited in claims 3 and 12);
- the light-blocking member being held on the light-transmitting member (as recited in claims 4 and 13);
- the light blocking member being provided as part of the light-transmitting member (as recited in claims 4 and 13);
- the light-blocking member being formed integrally with the light-transmitting member (as recited in claims 5, 6, 14 and 15);
- the light blocking member being formed by printing (as recited in claims 5 and 14); and

- the light-blocking member being formed by performing surfacing processing on the light-transmitting member (as recited in claims 6 and 15).

MIYASHITA et al. discloses an illumination device having:

- **a light source (as recited in claims 1 and 10)**, Figure 3, reference number 2;
- **the light source directly illuminating an object of illumination (as recited in claims 1 and 10)**, as seen in Figure 3;
- **a light-blocking member (as recited in claims 1 and 10)**, Figure 3, reference number 4;
- **the light blocking member being provided between the object of illumination and both the light source and the light reflecting member (as recited in claims 1 and 10)**, as seen in Figure 3;
- **the light blocking member blocking at least part of the light emitted by the light source (as recited in claims 1 and 10)**, as evidenced by Figure 3;
- the light blocking member having a certain ratio of a light-blocking rate for the first illuminating light portion to a light-blocking rate for the second illuminating portion of the illuminating light (as recited in claims 1 and 10);

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- **a light-transmitting member (as recited in claims 3 and 12),**  
Figure 3, reference number 3;
- **the object of illumination being place on the light transmitting member (as recited in claims 3 and 12),** column 4, lines 64 and 65;
- **the light-blocking member being provided to the light-transmitting member (as recited in claims 3 and 12),** as seen in Figure 3;
- **the light-blocking member being held on the light-transmitting member (as recited in claims 4 and 13),** as seen in Figure 3;
- **the light blocking member being provided as part of the light-transmitting member (as recited in claims 4 and 13),** column 4, lines 65-67;
- **the light-blocking member being formed integrally with the light-transmitting member (as recited in claims 5, 6, 14 and 15),** column 4, lines 65-67;
- **the light blocking member being formed by printing (as recited in claims 5 and 14),** column 5, lines 18-21;
- **the light-blocking member being formed by performing surfacing processing on the light transmitting member (as recited in claims 6 and 15),** column 5, lines 21-26;



- **a light-receiving element (as recited in claims 9 and 18), Figure 3, reference number 6;**
- **the light-receiving element receiving light reflected from the object of illumination (as recited in claims 9 and 18), as seen in Figure 3;**
- **a focusing lens (as recited in claims 9 and 18), Figure 3, reference number 5; and**
- **the lens condensing the light received from the object of illumination toward the light-receiving element (as recited in claims 9 and 18), column 5, lines 1 and 2.**

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the light transmitting member of MIYASHITA et al., such member including a light blocking member to protect the illumination device of BOHN from dust and other contaminants which might affect the performance of the light receiving element. The light-blocking member would eliminate undesired light reflected from the light-transmitting member. See MIYASHITA et al. from column 2 (line 61) to column 3 (line 3) and column 5 (lines 15-26).

Regarding the light blocking member having a certain ratio of a light-blocking rate for the light portion redirected by the reflecting member to a light-blocking rate for the light portion directly illuminating the object (as recited in claims 1 and 10), lacking a claimed definition of a specific ratio, such feature was considered an inherent feature of

the patented light blocking structure of MIYASHITA et al. as any ratio (emphasis added) would meet the claimed limitations.

### ***Allowable Subject Matter***

6. Claims 7, 8, 16, 17, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Applicant teaches an image sensor having a light source, a light-reflecting member and light blocking members. The light-blocking members are disposed between the object and both the light source and reflecting member. The light-blocking members are arranged to control the ratio of the illumination provided to an object of illumination directly from the light source, to the illumination provided by reflection from the light-reflecting member, such ratio being equal to one.

### ***Response to Arguments***


8. Applicant's arguments filed January 21, 2005 have been fully considered but they moot in view of new ground(s) of rejections.

### Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (571) 272-2378. The facsimile machine number for the Art Group is (703) 872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications maybe obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.



JOHN ANTHONY WARD  
PRIMARY EXAMINER

  
Inr

March 8, 2005